MAPLE FLOORING OVER RADIANT HEAT

Radiant heated substrates typically result in higher floor surface temperatures compared with other types of heating sources, such as forced air or baseboard heating. A higher floor temperature in winter will result in lower wood moisture, thereby creating a wider overall winter to summer range of wood moisture. This broader range of wood moisture will result in more extensive shrinkage in winter thus increase the total movement expected within the flooring between winter and summer.

Maple Flooring Manufacturers Association (MFMA) offers the following guidelines to assist in minimizing the effects of increased shrinkage and expansion to enhance performance of hard maple flooring systems where radiant heat is used.

Limiting flooring width will assist in limiting the amount of shrinkage that occurs between each row of flooring during the dry heating season. Wider flooring and plank flooring will concentrate more movement in fewer spaces between boards.

It is important to employ proper concrete slab construction methods where radiant heating pipes are embedded in the concrete slab, including precautions to prevent the absorption of ground moisture through the concrete during the non-heating season.

Use of radiant heat can exaggerate flooring expansion and contraction cycles when rapid changes in wood moisture content occurs. The inclusion of an outdoor thermostat is encouraged to assist in avoiding rapid changes in floor temperature. MFMA recommends a maximum slab temperature of 85 °F. Contact your heating system manufacturer for guidance.

As with all MFMA maple floor installations, all “wet trades” and other possible construction that introduces elevated levels of humidity should be completed prior to flooring installation. Permanent mechanicals should be operating at occupancy levels before activation of radiant heating system.

Additionally, concrete substrates must be adequately cured and confirmed acceptably dry as described in MFMA guidelines, measured with embedded relative humidity probes. The heating system should be activated at least 4-5 days prior to delivery of flooring to drive excess moisture out of slab. Where radiant heating pipes are incorporated into wood subfloor panels, ensure that moisture content of the wood subfloor is within 4% of the maple flooring prior to installation.

Allow flooring to become acclimated to normal site conditions and then install according to manufacturer’s instructions. When gluing directly to concrete, MFMA recommends you follow the flooring manufacturer’s recommendations for the proper adhesive to use with radiant heat. When nailing maple flooring, it is important to not puncture the radiant heating tubes during the nailing process. The location of the radiant heating tubes should be marked and, if applicable, nail only into the subfloor sleepers or wood joists.

Regular sanding and finishing methods are then employed to complete the installation.

If you have any additional questions, please contact MFMA’s Technical Director at 888.480.9138.

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